

This listing of claims replaces all prior listings.

1-6. (Cancelled).

7. (Currently Amended) A method of manufacturing a solid-electrolyte battery comprising:

- forming a first set of gel-electrolyte layers on both sides of a positive electrode collector;
- forming a second set of gel-electrolyte layers on both sides of a negative electrode collector;
- forming a positive electrode comprising the first set of gel-electrolyte layers on both sides of the positive electrode collector;
- forming a negative electrode comprising the second set of gel-electrolyte layers on both sides of a negative electrode collector;
- laminating said positive electrode and said negative electrode such that one of the first set of gel-electrolyte layers and one of the second set of gel-electrolyte layers face each other;
- winding said positive electrode and said negative electrode such that another one of the first set of gel-electrolyte layers and one of the second set of gel-electrolyte layers face each other;
- sealing the wound electrode in a film pack formed by laminating a nylon layer, an aluminum layer and a polypropylene layer on the wound electrode and welding an outer end of the wound electrode film pack; and
- after sealing said wound electrodes into the film pack, subjecting said wound electrodes to heat treatment so that each of the first set of gel-electrode layers and the one of the second set of gel-electrolyte layers facing each other are integrated with each other into one continuous seamless layer by heating the laminated electrode in an atmosphere having a temperature of between 70 and 100 degrees C,

wherein,

- said gel-electrolyte layers comprise an electrolyte salt, a matrix polymer, and a swelling solvent serving as a plasticizer,
- said gel-electrolyte layers comprises LiPF_6 ,
- the positive electrode active material has a density of 3.6 g/cm^3 and the negative electrode active material has a density of 1.6 g/cm^3 ,

said matrix polymer includes polyvinylidene fluoride and
polyhexafluoropropylene, and

the matrix polymer has an ion conductivity higher than 1 mS/cm at room
temperatures.

8-9. (Canceled).

10. (Original) The method of claim 7, wherein said wound electrodes are subjected to
heat treatment for ten minutes.

11-12. (Cancelled)

13. (Previously Presented) The method of claim 7, wherein said nonaqueous solvent is
selected from the group consisting of ethylene carbonate, propylene carbonate, butylene
carbonate, γ -butyrolactone, γ -valerolactone, diethoxyethane, tetrahydrofuran, 2-
methyltetrahydrofuran, 1, 3-dioxane, methyl acetate, methyl propionate, dimethylcarbonate,
diethyl carbonate or ethylmethyl carbonate or their mixture.

14.-16. (Cancelled)

17. (Currently Amended) A method of manufacturing a solid-electrolyte battery
comprising:

forming gel-electrolyte layers on both sides of a positive electrode and a negative
electrode, wherein one of said solid-electrolyte layers formed on said positive electrode and one
of said gel-electrolyte layers formed on said negative electrode face each other;

winding said positive electrode and said negative electrode after pressing;

sealing the wound electrode in a film pack formed by laminating a nylon layer, an
aluminum layer and a polypropylene layer on the wound electrode and welding an outer end of
the ~~wound electrode~~ film pack; and

after sealing said wound electrodes into the film pack, subjecting said wound electrodes
to heat treatment so that said gel-electrolyte layers formed on said positive electrode and said
gel-electrolyte layers formed on said negative electrode are integrated with each other into one
continuous seamless layer by heating the laminated electrode in an atmosphere having a
temperature of between 70 and 100 degrees C,

wherein,

said gel-electrolyte layers comprise an electrolyte salt, a matrix polymer, and a
swelling solvent serving as a plasticizer

said gel-electrolyte layers comprises LiPF_6 ,

the positive electrode active material has a density of 3.6 g/cm^3 and the negative electrode active material has a density of 1.6 g/cm^3 ,

said matrix polymer includes polyvinylidene fluoride and polyhexafluoropropylene, and

the matrix polymer has an ion conductivity higher than 1 mS/cm at room temperatures.